VIRGIN ISLANDS FIRE SERVICE
COASTAL CONSISTENCY DETERMINATION REQUEST
CHARLES A. "TAPPY" SEALES FIRE STATION RETROFIT PROJECT, ST. CROIX, U.S. VIRGIN ISLANDS

INTRODUCTION

The Virgin Islands Fire Service is proposing to demolish and rebuild the Charles A. "Tappy" Seales Fire Station located in Grove Place, St. Croix, U.S. Virgin Islands. The existing Fire Station was severely damaged by Hurricane Maria on September 20, 2017. The storm produced strong destructive winds, power outages, down power lines, structure and property damage and fallen trees. The storm system also deposited heavy rainfall amounts throughout the U.S. Virgin Islands.

PROJECT LOCATION

The Fire Station is adjacent to a VIPD Weed and Seed Structure. Both structures are located on Parcel No. 29 Estate (Remainder Plot 331-consolidated) Grove Place, St. Croix, U.S. Virgin Islands. Located on Parcel No. 324 Estate Grove Place is an open pavilion with seating and a generator that supplies back up electrical power to the Fire Station. Directly to the north are historic ruins located on Parcel No. 333-B Estate Grove Place. Most of the access and driveway to the Fire Station and VIPD structure are located on Parcel No. 331 Estate Grove Place.

Figure 1. Site Location

PROJECT DESCRIPTION

The property of the existing fire station building is identified as Plots 29, 324 and 330 Estate Grove Place. The ground surface elevations on the property varies from about +192 to + 174 feet MSL. The developed portion of the property is between +190 and +192 feet MSL. The remainder of the lot slopes into a canal that runs north to south along the back portion of the property. This canal area is heavily wooded. The existing station, which consists of the Main Building and the Firetruck Bay will be demolished. It is approximately 2,025 square feet in size and is a single story in height. The Main building is a CMU (Concrete Masonry Unit) approximately 30 ft. Wx50ft. L. The Firetruck Bay is of mixed construction with a portion of it of framed wood construction. The size is approximately 15 ft.-wide X 35 ft.-long. Most of the roofing over the Firetruck Bay was blown off by the storm. A portion of the roof over the Main Building was also blown off during the storm. There are two other structures on the site that will be demolished as a part of the project. The first is the Police Department Weed and Seed Building, a single-story structure that is approximately 37 feet by 33 feet and 1,221 square feet in size. The second structure is a gazebo-type structure that is used for outdoor seating. It is 12 feet by 28 feet or 336 square feet.

Figure 2. Current Front View of Fire Station

Figure 3. Current Side View of Fire Station

Figure 4. Fire Truck Bay with Limited Space

Figure 5. Damaged Roof over Fire Truck Bay

The Seales / Grove Fire Station handles 35%- 40 % of all service calls on the island of St. Croix. However, the station's operational capacity is compromised by an inadequate garage bay, limited interior functional space, and a layout that inhibits logistics based operational flow. The construction of a safe room to ensure life safety for personnel performing critical emergency response functions during an emergency is also included.

The existing building is approximately 2,025 Sq. Ft. and is constructed mostly of CMU exterior walls with some wood frame construction. The functional spaces included within the Facility are:

- Day Room
- Kitchen Area
- Garage
- Bed Room (2)
- Restroom

The existing building was originally constructed in 1980 prior to the Territory being subjected to major hurricane damage in the late 80's from Hurricane Hugo to more recently, Hurricane Maria in 2017. Since the time of Hurricane Hugo in 1989, the Virgin Islands has adopted the then Uniform Building Code for structures, and more recently, the International Building Code. The existing building is in poor construction as a result of damages from Hurricane Maria and cannot meet the structural requirements of the 2018 International Building Code as it is presently constructed. It will have to be demolished and rebuilt from the ground up. Furthermore, the existing structure cannot accommodate the program requirements for a functional replacement.

The New Fire Station consists of the construction of a 6,800 square-foot, one-story fire station and safe room for the Virgin Islands Fire Services. Construction shall include sitework, asphaltic paving, concrete foundations, steel framing, concrete-masonry units, impact-resistant assemblies, single-ply roofing, interior finishes, mechanical and electrical systems as shown in the construction drawings prepared by the Jaredian Design Group – Architects, Engineers and Construction Managers. Some items that will be Owner provided include: office furniture & telecommunication network.

The design overview included as a part of the approved Hazard Mitigation Grant states the Station will be approximately 5,000 Sq. Ft. (including 2,500 Sq. Ft. of interior space and 2,500 Sq. Ft. for garage bay). This is based on research of fire station architectural design and industry standards and size averages in the United States for stations with similar operational needs, populations and land area served. The design review centered on a review of the fire station designs with functional requirements and components similar to the proposed project including space allocated for important functions such as:

- Two Apparatus/Truck Bays
- Turnout Gear
- Gear Washing and Drying
- Storage
- Bathroom and Shower Facilities
- Fitness Area
- Control/Radio Room
- Safe Room

ENVIRONMENTAL IMPACTS

Climate /Weather

Sedimentation and erosion controls will be implemented to ensure rainfall will not impact the nearby drainage ghut during construction. This will include silt fencing, gravel entrances, at the entry gate, and check dams. The replacement structure is designed to be resistant as required by updated design criteria for hurricanes and other seismic activity. The structure will consist of poured concrete walls and roofs. A section of the building will be utilized as a Safe Room to be utilized by the Fire Service and others during hurricanes and other natural disasters. The entire project is designed to resist up to 180 m/h wind forces which is equivalent to a Category 5 hurricane and higher.

Landform Geology, Soils and Historic Land Use

The soil types across the property of the proposed location are Glynn Gravelly Loam 2 to 5 percent slopes (GyB) and Glynn Gravelly Loam 5 to 12 percent slopes (GyC). Glynn Gravelly Loam (GyB)(GyC) soil type is found on alluvial fans and terraces and is between 3 and 300 acres in area. The soil profile in the upper 60 inches is comprised of gravelly loam and gravelly clay loam. It varies in color from dark gray to yellowish brown. The soil is well drained with a moderately slow permeability. The depth to the seasonal high-water table is deeper than 5 feet and is rarely flooded. The shrink-swell potential is moderate.

A Soils Investigation Report was prepared to identify the appropriate foundation for the structure. The existing soils are appropriate for the location of the new structure. The foundations are designed for 3,000 PSF bearing pressure.

The proposed structure is located adjacent to a Historic ruin that is located on Parcel 333B (single grave). Our site itself already contains the existing Fire Station and Weed and Seed Structure. The fire station itself and the adjacent Weed and Seed Structure sit on improved property and do not encroach on the historical ruins. It is therefore already a disturbed site. Coordination has been done with the State Historic Preservation Office (SHPO) to determine the requirements to meet the Section 106 review. SHPO has given clearance for the design of the proposed fire station. An archeologist will be required during the excavation phase to protect and categorize any buried resources.

Drainage, Flooding and Erosion Control

The site is located in the FEMA Flood Zone-A due to the presence of a drainage ghut directly north of the Site. There has been no base flood elevation determined for Zone-A. However, the redevelopment of the site should include an increase in the height of the existing grade of approximately two (2) feet to avoid inundation of flood waters. The proposed design does that. Measures to control sedimentation and erosion will be implemented during all phases of the proposed project to ensure that rainfall will not impact the nearby drainage ghut during construction.

Drainage Patterns

The proposed project will direct drainage on the northern side and the cistern overflow towards a gravel/rock soak-away for percolation prior to any over-flow into the nearby drainage ghut. On the southern side of the project site drainage shall sheet flow from existing parking areas onto the existing roadway. There will be no increase of drainage volume as a result of the project.

Coastal Floodplain

The project is located inland away from the coastal waters of St. Croix. It is nearby an existing drainage ghut to the north that will eventually flow toward the coastal areas. All site drainage and cistern overflow are directed to a gravel/rock soak-away for percolation prior to overflowing into the drainage ghut. In this way, most sediment will be trapped within the soak-away in lieu of creating any single point pollution into the drainage ghut.

Fresh Water Resources

The proposed project will implement erosion control measures to limit any potential impact on fresh water resources on the nearby drainage ghut. Site drainage will be directed to a gravel/rock soak-away for percolation prior to overflowing into the drainage ghut. In this way most sediment will be trapped within the soak-away in lieu of creating any point solution into the drainage ghut.

Oceanography

The project will occur well inland and will not be affected by sea storm events.

Marine Resources

The project will occur well inland and will have no impact on the marine environment.

Terrestrial Resources

The proposed project will occur within existing paved roadways, parking areas, and previously developed building areas. No existing terrestrial resources or native flora or fauna will be significantly impacted during the construction of the new fire station. There is a solitary mango tree that must be removed as it conflicts with the new entrance to the employee parking. The landscaping part of the new project will include a replacement tree.

Figure 6. Solitary Mango Tree

Wetlands

The project will have no impact on wetlands, as there are no wetlands in or adjacent to the proposed project site. There is an existing drainage ghut to the north on the site which will not be impacted significantly by the new construction.

Rare and Endangered Species

There are no endangered or threatened species habitat existing within the proposed project site. Therefore, no federal or local or threatened species will be impacted by this project.

Air Quality

All of St. Croix is designated Class II by the Environmental Protection Agency, in compliance with National Ambient Air Quality Standards. In Class II air quality regions, the following air pollutants are regulated: open burning, visible air contaminants, particulate matter emissions, volatile petroleum products, sulfur compounds, and internal combustion engine exhaust (Virgin Islands Code Rules and Regulations). Trenchers will be used during project construction and will create combustion engine exhaust during use. Upon the completion, air quality will return to pre-construction conditions. The project will include a stand by generator. Application will be made for the appropriate permits for this equipment.

IMPACT ON MAN'S ENVIRONMENT

Land and Water Use Plans

The project area is comprised of three separate parcels:

1. Parcel No. 29 Estate Grove Place / 10, 530.4Sq. Ft.
2. Parcel No. 324 Estate Grove Place / 2,842.2 Sq. Ft.
3. Parcel No. 331 Estate Grove Place / 13,330.6Sq. Ft.

Each of these parcels do not meet Virgin Island Zoning Code requirements for R-4 Residential Medium Density. Title 29 of the Virgin Islands Code states under Section 231 that Fire Stations are permitted in the R-4 district if there is a minimum lot area of 15,000 SF. The Virgin Islands Government has consolidated these three parcels into Remainder Plot 331-Consolidated and Road Plot 33A. Remainder Plot 331-Consolidated is now 23, 522 SF or 0.54 acres. Road Plot 331A is 7,013 SF or 0.161 acres.

Visual Impacts

Visually, the new Fire Station will be an improvement over the existing facility it is replacing. The reinforced concrete structure will have a contemporary appearance and will certainly

become a landmark within the Grove Place community. The Safe Room addition will provide much needed space for community events.

Social Impacts and Economic Impacts

The proposed Fire Station will have significant social and economic impacts to the surrounding community. The existing facility serves approximately 40% of all the fire calls on St. Croix. The existing facility does not meet those needs. The inclusion of the VI Police functions from the Weed and Seed Center and new Safe Room will result in a completed project that consolidates public safety requirements. These functions will include prevention programs for at-risk individuals. The construction of the new approximately $4.9 Million-Dollar structure will also provide economic opportunities for contractors and residents.

Historical and Archaeological Resources

The proposed project is located adjacent to the historical ruins of the Grove Place mansion. There is a solitary grave site located near those ruins. Those ruins are located on an entirely separate parcel and will not be disturbed by the construction activities. Consultation has been done with the USVI State Historic Preservation Office (SHPO). The SHPO has cleared the site for the full design development. Archeological monitoring will be required by the SHPO during the excavation activities on the site.

Figure 7. Solitary Grave on Neighboring Parcel.

Waste Disposal and Accidental Spills

Equipment will be kept in good operational condition during the proposed project timeline and will not be fueled on site. Any excess excavated material and debris will be collected, taken off-site and properly disposed of. Additionally, solid waste from the completed Station will be disposed of at the landfill. Accidental spills in the Apparatus Bay will be directed to a trench drain and then to an oil/sand interceptor before it discharges to the street.

COASTAL CONSISTENCY

The proposed Charles A. "Tappy" Seales Fire Station Retrofit Project has a negligible potential of impacting environmental resources, or ambient water quality during construction. As necessary, sedimentation and erosion control measures will be implemented during construction to ensure that no environmental impacts occur. The proposed project will occur only within previously altered areas and archeological monitoring will be conducted to minimize impact on historical or cultural resources. Project activities stop if historic remains or resources are encountered, and SHPO will be contacted to determine the best course of action.

The Coastal Zone Management Act of 1972 requires that federal actions, within and outside the coastal zone, which have reasonably foreseeable effects on any coastal use (land or water), or natural resources of the Coastal Zone be consistent with the enforceable policies of a state's federally approved Coastal Management Program. The Grove Place Charles A. "Tappy" Seales Fire Station Retrofit Project is designed to be within existing roadways and previously disturbed areas. The project will not impact any natural resources and will improve the visual landscape in the Grove Place Area. As proposed, it will be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of the U.S. Virgin Islands' CZM Program. This Federal Consistency Determination demonstrates the Grove Place Seales Fire Station & Retrofit project's compliance with the U.S. Virgin Islands' CZM Program.

The project meets each of the basic goals of the USVI for its coastal zone as set forth in the Virgin Islands Code Title 12, Conservation Chapter 21, Virgin Islands Coastal Zone Management [V.I. Code tit. 12, § 903(b)]. Additional details are as follows:

USVI Code Title Twelve Conservation, Chapter 21 § 903 (b)

1. **Protect, maintain, preserve and, where feasible, enhance and restore, the overall quality of the environment in the coastal zone, the natural and man-made resources therein, and the scenic and historic resources of the coastal zone for the benefit of residents of and visitors of the United States Virgin Islands.**

   The proposed Grove Place Charles A. "Tappy" Seales Fire Station Retrofit Project is designed to be within existing roadways and previously disturbed areas. The project will not impact any natural resources and will improve the visual landscape in the Grove Place Area.

2. **Promote economic development and growth in the coastal zone and consider the need for development of greater than territorial concern by managing: (1) the impacts of human activity and (2) the use and development of renewable and nonrenewable resources so as to maintain and enhance the long-term productivity of the coastal environment.**

This proposed project promotes the economic development and growth in the coastal zone by providing a necessary public service on the island through the development of a multi-use complex that includes a Fire Station, Police Substation, and Safe Room/ Community Meeting Area. The new facility will replace the dilapidated and undersized fire station that serves almost 40% of the fire calls on St. Croix.

3. **Assure priority for coastal-dependent development over other development in the coastal zone by reserving areas suitable for commercial uses including hotels and related facilities, industrial uses including port and marine facilities, and recreation uses.**

   The proposed project does not impact coastal dependent development within the coastal zone area.

4. **Assure the orderly, balanced utilization and conservation of the resources of the coastal zone, taking into account the social and economic needs of the residents of the United States Virgin Islands.**

   The proposed Charles A. "Tappy" Seales Fire Station Retrofit Project is designed to be within existing roadways and previously disturbed areas. The project will not impact any natural resources and will improve the visual landscape in the Grove Place area. The proposed project will provide critical public services and therefore will meet the economic and social needs of the residents of the Grove Place area.

5. **Preserve, protect and maintain the trust lands and other submerged and filled lands of the United States Virgin Islands so as to promote the general welfare of the people of the United States Virgin Islands.**

   The proposed project will not impact trust lands or other submerged or filled lands of the U.S. Virgin Islands.

6. **Preserve what has been a tradition and protect what has become a right of the public by ensuring that the public, individually and collectively, has and shall continue to have the right to use and enjoy the shorelines and to maximize public access to and along the shorelines consistent with constitutionally-protected rights of private property owners.**

   The proposed project will in no way affect public access to, or use of, the shoreline. The project is located well inland.

7. **Promote and provide affordable and diverse public recreational opportunities in the coastal zone for all residents of the United States Virgin Islands through acquisition, development and restoration of areas consistent with sound resource conservation principles.**

   The proposed project will not affect public recreational opportunities in the coastal zone.

8. **Conserve ecologically significant resource areas for their contribution to marine productivity and value as wildlife habitats, and preserve the function and integrity of reefs, marine meadows, salt ponds, mangroves and other significant natural areas.**

The proposed project is designed so that it impacts only previously disturbed areas like paved and unpaved roadways and maintained residential yard setbacks. The project will have no impact on natural resources and will utilize best management practices (BMPs) to minimize areas of disturbance, thereby protecting adjacent habitats.

9. **Maintain or increase coastal water quality through control of erosion, sedimentation, runoff, siltation and sewage discharge.**

   The proposed project will have no long-term change on sedimentation or erosion. Storm water will be directed to a gravel/ rock soak-away for percolation before any overflow into the existing drainage ghut.

The proposed Charles A. "Tappy" Seales Fire Station Retrofit Project is designed to be within existing roadways and previously disturbed areas. The project will not impact any natural resources and will improve the visual landscape in the Grove Place Area. It will maintain coastal water quality through control of erosion, sedimentation, runoff, and siltation. As designed, it protects, maintains, preserves, and enhances the overall quality of the environment in the coastal zone, the natural and man-made resources therein, and the scenic and historic resources of the coastal zone for the benefit of residents of and visitors of the USVI. It is therefore consistent with the policy set forth in the Virgin Islands Code Title 12, Conservation Chapter 21, Virgin Islands Coastal Zone Management [V.I. Code tit. 12, § 903 (b)].

END COASTAL CONSISTENCY DETERMINATION REQUEST